DESIGNER NOTES:

A. DESIGN LOADS:

1. SNOW LOADS

a. GROUND SNOW LOAD	P=20 PSF
b. EXPOSURE FACTOR	Ce=1.0
c. THERMAL FACTOR	Ct=1.0
d. IMPORTANCE FACTOR	I=1.0
e. SNOW DENSITY	15 PCF
f. ADDITIONAL SNOW DRIFT LOADS WERE CALCULATED IN ACCORDANCE WITH ASCE 7-92	

2. WIND LOADS

a. BASIC WIND SPEED	V=80 MPH
b. IMPORTANCE FACTOR	I=1.05
c. EXPOSURE FACTOR	C
d. CATEGORY	I

3. SEISMIC LOADS

a. SEISMIC ZONE "1	Z= 0.075
b. IMPORTANCE FACTOR	I= 1.0
c. STRUCTURAL SYSTEM COEFF.	RW= 6
d. PERIOD COEFFICIENT	C= 2.75

4. ROOF LIVE LOADS

a. CONSTRUCTION & MAINTENANCE	20 PSF (MIN.)
b. MEZZANINE	80 PSF

B. FOUNDATION:

1. ALLOWABLE SOIL EXCESS BEARING PRESSURE	3000 PSF
2. FROST DEPTH	3'-0"

C. CONCRETE AND REINFORCEMENT: (SHALL CONFORM TO ACI 318-89, 1992 REVISION)

1. CAST-IN-PLACE CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000psi @ 28 DAYS.
2. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.
3. LAP SPLICES SHALL CONFORM TO ACI-318-89, CLASS B TENSION SPLICE. SEE TABLE ON SHEET S3.3.
4. CONCRETE COVER SHALL CONFORM TO ACI 318-89. SEE TABLE ON SHEET S3.3.

D. CONCRETE MASONRY:

1. CONCRETE MASONRY UNIT SHALL CONFORM TO ASTM C-90, TYPE I, GRADE N-I AND HAVE A MINIMUM COMPRESSIVE STRENGTH PER UNIT OF 1700psi.
2. MORTAR SHALL CONFORM TO ASTM C-270, TYPE S, AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 1800psi.
3. CONCRETE MASONRY UNITS WITH TYPE S MORTAR SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE f'm=1350psi
4. GROUT SHALL CONFORM TO ASTM C-476 AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2000psi.
5. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
6. JOINT REINFORCEMENT SHALL BE PLACED @ 16" O.C. VERTICALLY, EXCEPT @ ACCENT BRICK LOCATIONS.
7. SEE ARCH DWGS FOR MASONRY CONTROL JOINTS AND BRICK EXPANSION JOINT LOCATIONS.

E. STEEL DECK:

1. STEEL ROOF DECK SHALL CONFORM TO THE STEEL DECK INSTITUTE (SDI) SPECIFICATIONS FOR STEEL ROOF DECK, PUBLICATION NO. 27, 1989.
2. NON-COMPOSITE STEEL FORM DECK SHALL CONFORM TO THE STEEL DECK INSTITUTE (SDI) SPECIFICATIONS FOR COMPOSITE STEEL FLOOR DECK, PUBLICATION NO. 27, 1989. ALL COMPOSITE STEEL DECK SHALL BE GALVANIZED.
3. SEE STEEL DECK SCHEDULE FOR ADDITIONAL INFORMATION.

F. STRUCTURAL STEEL:

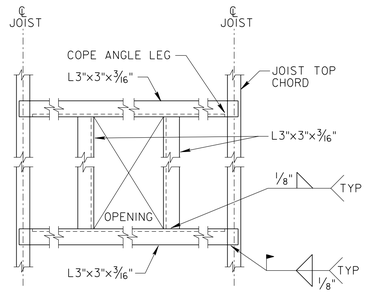
1. ROLLED PLATES AND SHAPES SHALL CONFORM TO ASTM A36, Fy=36ksi.
2. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B, Fy=46ksi.
3. ANCHOR BOLTS SHALL CONFORM TO ASTM A36, A307
4. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE S, GRADE B.
5. WELD ANCHOR STUDS SHALL CONFORM TO ASTM A108.
6. DOUBLE ANGLE TRUSS MEMBERS SHALL HAVE INTERMITTENT FILLERS AS REQUIRED BY SECTION E4 OF THE AISC MANUAL OF STEEL CONSTRUCTION, 9th EDITION.
7. WELDING
   a. WELDING ELECTRODES SHALL BE E70XX OR E60XX FOR STEEL DECK ATTACHMENT. ALL OTHER WELDING SHALL USE E70XX ELECTRODES.
   b. WELDING SHALL CONFORM TO AWS D1.1.

G. STEEL JOIST:

1. SHALL CONFORM TO STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS OF THE STEEL JOIST INSTITUTE (S.J.I.). SPECIAL JOISTS "SP" SHALL BE DESIGNED BY THE CONTRACTOR FOR LOADS AND REQUIREMENTS SHOWN ON JOIST LOADING DIAGRAM. SEE THIS SHEET FOR SPECIAL JOIST LOADING DIAGRAM.
2. STEEL JOISTS SHALL BE WELDED TO SUPPORTS WITH 2-2 INCH LONG 3/16" FILLET WELDS MINIMUM UNLESS NOTED OTHERWISE.
3. JOIST BRIDGING SIZE AND SPACING SHALL BE DETERMINED BY THE CONTRACTOR.
4. APPROXIMATE CONCENTRATED LOADS FOR MECHANICAL AND ELECTRICAL EQUIPMENT ARE SHOWN ON ROOF FRAMING PLANS. EXACT LOCATION AND WEIGHT OF EQUIPMENT TO BE HUNG FROM JOISTS SHALL BE COORDINATED BY CONTRACTOR WITH EQUIPMENT SUPPLIER AND JOIST SUPPLIER. JOIST SHALL BE DESIGNED TO SUPPORT MECHANICAL EQUIPMENT PROVIDED. A LOAD OF 50 LB. OR LESS MAY BE APPLIED AT ANY LOCATION ALONG THE BOTTOM OR TOP CHORD OF ANY JOIST. A LOAD OF 100 LB. OR LESS MAY BE APPLIED TO THE BOTTOM OR TOP CHORD AT ANY JOIST AT A BOTTOM OR TOP CHORD PANEL POINT. IF ANY LOAD GREATER THAN 100 LBS. MUST BE ADDED TO A JOIST AFTER FABRICATION OF THE JOIST, THE JOIST MANUFACTURER SHALL BE CONSULTED AND APPROPRIATE ALTERATIONS MADE. IN ANY EVENT, CONCENTRATED LOADS SHOULD NOT LOAD THE JOISTS BEYOND THEIR RATED CAPACITY.
5. JOIST DEFLECTION SHALL BE LIMITED TO L/240 FOR COMBINED DEAD AND LIVE LOAD.

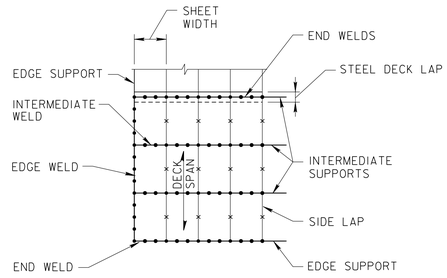
GENERAL NOTES:

1. REFERENCE ELEVATION 100'-0"= 120.00' ABOVE MEAN SEA LEVEL ELEVATION.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND THE CONTRACTING OFFICER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY.
3. CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE BRACING AND SHORING AT ALL TIMES DURING CONSTRUCTION.
4. STRUCTURAL DRAWINGS SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, SLEEVES, ETC. NOT SHOWN ON STRUCTURAL DRAWINGS. COORDINATE LOCATION, SIZE, AND REINFORCING OF ALL OPENINGS WITH RESPECTIVE TRADES BEFORE FABRICATION.
5. UNLESS NOTED OTHERWISE (U.N.O.) MINIMUM BOLT SPACING SHALL BE 3", MINIMUM EDGE DISTANCE SHALL BE 1½".
6. THE WORKING LINES (W.L.) OF ALL STRUCTURAL STEEL SHALL COINCIDE AT A COMMON POINT AS SHOWN IN THE SECTIONS & DETAILS, U.N.O.
7. SEE DWG. S5.1 AND S5.2 FOR TYPICAL CMU WALL REINFORCEMENT REQUIREMENTS.



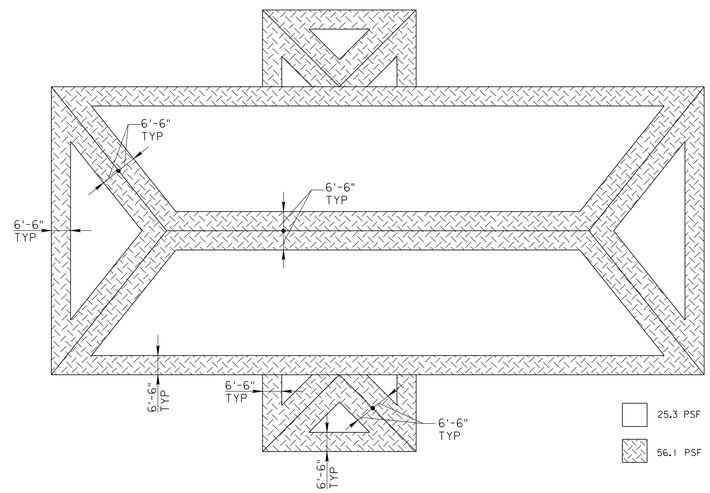
NOTE: COORDINATE EXACT SIZE AND LOCATION OF OPENING WITH ACTUAL MECHANICAL EQUIPMENT SUPPLIED.

TYPICAL ROOF PENETRATION DETAIL
NO SCALE

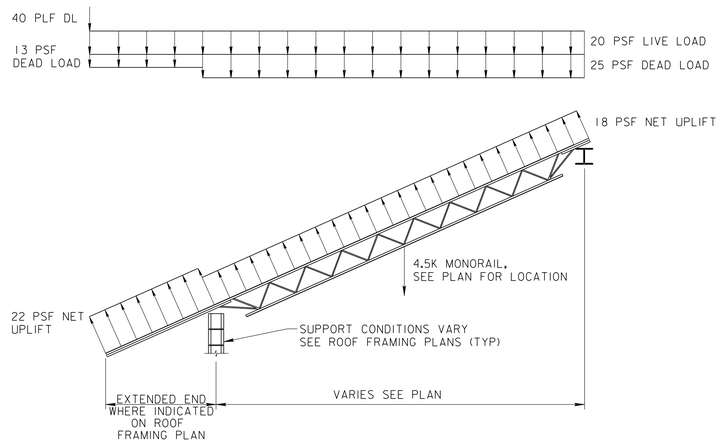


STEEL DECK ATTACHMENT LAYOUT
NO SCALE

STEEL ROOF DECK & STEEL FORM DECK SCHEDULE				
LOCATION OF DECK	STEEL DECK GAGE & TYPE	DECK ATTACHMENT: SIDE SUPPORTS END SUPPORTS INTERMEDIATE SUPPORTS	DECK ATTACHMENT: SIDE LAPS	MIN. SECTION PROPERTIES
ALL ROOF DECK	22 GAUGE 1½" DEEP WIDE RIB DECK FY=33 KSI	5/8" DIA. PUDDLE WELD @ 12' O.C.	1-NO. 10 TEK SCREWS PER DECK SPAN	PER SDI
MEZZANINE	22 GAUGE 0.6" DEEP FORM DECK FY=80 KSI W/6x6 W2.9XW2.9 WWF	5/8" DIA. PUDDLE WELD @ 12' O.C.	1-NO. 10 TEK SCREWS PER DECK SPAN	I=0.021 IN4 /FT, Sp=Sn=0.068 IN3 /FT



DESIGN WIND UPLIFT PRESSURES FOR SSMR DESIGN
NO SCALE



SPECIAL JOIST (`SP') JOINT LOADING DIAGRAM
NO SCALE

NOTES FOR 'SP' JOIST DESIGN:

1. DISTRIBUTED LOADS ARE SHOWN IN POUNDS PER SQUARE FOOT OF ROOF AREA. CONCENTRATED LOAD IS SHOWN IN POUNDS PER LINEAR FOOT OF ROOF EDGE. CONTRACTOR SHALL CALCULATE JOIST LOADINGS BASED UPON JOIST SPACINGS SHOWN ON ROOF FRAMING PLAN.
2. NET UPLIFT SHALL BE TAKEN TO MEAN WIND UPLIFT MINUS ROOF DEAD LOAD.
3. ALL ROOF JOISTS SHALL BE CAPABLE OF RESISTING THE FOLLOWING LOAD COMBINATIONS:
   a.) DEAD LOAD + LIVE LOAD
   b.) NET UPLIFT

   IF JOISTS LARGER THAN THOSE SHOWN ON THE PLANS ARE REQUIRED TO RESIST THE LOADS, THEY SHALL BE DESIGNED BY THE JOIST MANUFACTURER AND FURNISHED AT NO ADDITIONAL COST TO THE GOVERNMENT. JOIST DEFLECTION SHALL BE LIMITED TO L/240 FOR COMBINE DEAD AND LIVE LOADS.

EXAMPLE 100% DESIGN

$$ – THINK VALUE ENGINEERING – $$

Revisions

Symbol	Descriptions	Date	Approved

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
OMAHA, NEBRASKA

Designed by: X.X.X	SITE NAME: OMAHA DISTRICT DESIGN GUIDE — SITE LOCATION
Drawn by: X.X.X.	**DESIGN AND GENERAL NOTES**
Checked by: X.X.X.	
Reviewed by: X.X.X.	Plot Scale Ratio: 1:1 — Date: JUNE 2002
Submitted by: Chief: Section	Design File: DG10S100.DGN — Spec. No.: DACA 45 — Drawing Code: X — Contract No.: DACA 45 — Sheet reference number: **S1.01**

COMPUTER AIDED DESIGN & DRAFTING

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